

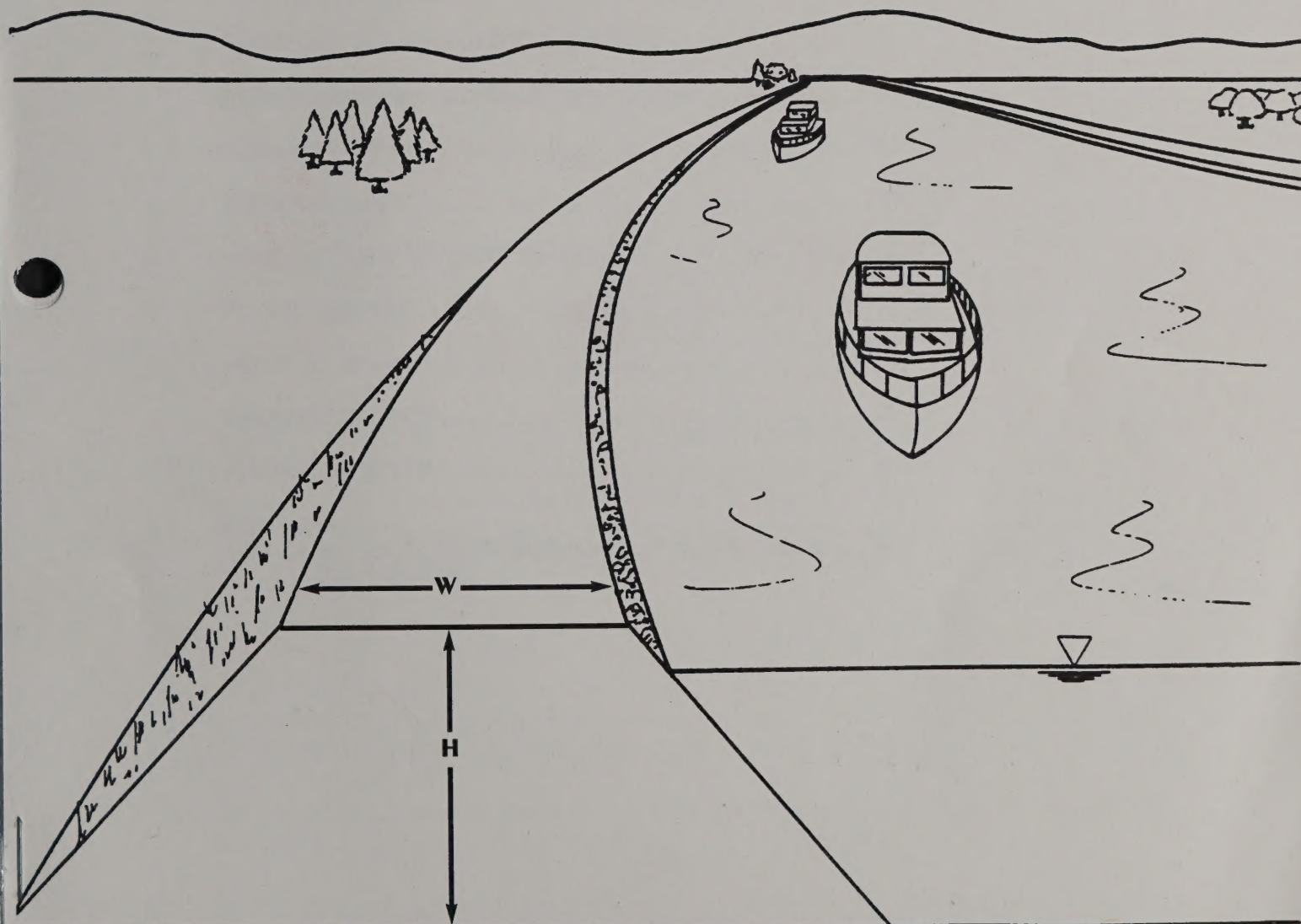
DFD

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION



1998 CANAL
IMPOUNDING EMBANKMENT
CONDITION SURVEY

GEOTECHNICAL ENGINEERING
BUREAU



SEPTEMBER 1999



STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
ALBANY, N.Y. 12232

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1988 CANAL IMPROVING EMBANKMENT INSPECTIONS.....A-1	
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STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
ALBANY, N.Y. 12232

JOSEPH H. BOARDMAN
COMMISSIONER

GEORGE E. PATAKI
GOVERNOR

September 10, 1999

Address Reply To:

Mr. Wesley P. Moody, Director
NYS Dept. of Transportation
Geotechnical Engineering Bureau
Bldg. 7 - State Campus
1220 Washington Avenue
Albany, NY 12232-0863

Mr. Duane Dodds, Director
Design Bureau, 3rd Floor
c/o NYS Thruway Authority
200 Southern Blvd.
P.O. Box 189
Albany, NY 12201-0189

Dear Mr. Dodds:

The purpose of this report is for this Bureau to provide field evaluations of the water impounding embankments along the Canal. Our inspections evaluate the conditions of the earth embankments only. We understand that the structure portions (concrete walls and culverts) are inspected by each Division. Some culverts have water leaking into them from joints or possibly cracks. Only at locations where structural deficiencies are causing stress to the embankment area have we included them in our evaluations.

Attached please find the summary of the 1998 Canal Impounding Embankment Condition Survey. The Condition Survey was compiled with the use of the thermal imaging report prepared by PAR Government Systems Corporation, March 26, 1998 (based on a flight flown in fall of 1997) and the physical site inspections performed by various members of this Bureau, with assistance from Division personnel. The thermal imaging report covers most of the embankment involved. The printed thermal imaging report was used as an overview of the Canal, and the images on disk (viewed with Arc View) allow zooming to a specific site for more detail.

The summary charts provide both a rating and ranking system for each portion of embankment to categorize embankment condition and help prioritize repairs, where necessary. Notice that the report format has been restructured. The following changes have been made:

1. The report is organized by the county in which the Canal is located and the side of the Canal the embankment is located (North, South, East, West).
2. At your request, the rating system has been changed to a scale of one (1) to seven (7) to conform to the Canal Maintenance Quality Manual 1993, Appendix G, Page 20,

(prepared by others) rather than the one (1) to four (4) rating system established by this Bureau in 1988. In both systems, low numbers indicate more severe problems.

3. The station limits have been modified:
 - a. Several embankment sections less than five feet in height have been removed from the list. Embankments retaining less than a few feet of water (because of the inboard freeboard) should not be included.
 - b. Embankment sections adjacent to each other have been combined where appropriate.
 - c. Embankment stations have been adjusted to reflect the station limits determined from the residency sheet and reported on the field inspections sheets.

Additionally, the Risk Assessment system this Bureau uses to evaluate the individual embankment sections has been revised. Our former system used a sliding numerical scale for rating the sites to create a bias when ranking the problem areas, and the scale is now a linear numerical scale. Also, two categories were added. The two parameters that were added - outboard slope vegetation growth, and inboard slope condition - appeared so frequently in the comments section of the evaluation forms, that it was necessary to include them as categories.

The evolution of the numerical rating system came about through the experience of completing two inspections, one in 1988 and one in 1993. When the old rating system was devised for the 1988 field survey, we had no previous inventory to use as a basis for the range of severity and number of problem sites that would be encountered. Thus, a very broad band rating system was instituted that facilitated the ranking process. Since many of the serious problem sites have been repaired through the diligent effort of Canal Maintenance forces and the expenditure of contract funds, the latitude originally designed into the rating system is not needed. For the serious life threatening problems that may be found, the new system still has provisions to recommend immediate repair or frequent (weekly) monitoring.

To understand how these two systems compare, see the attached Figures 1, 2, and 3 which explain the changes to the risk assessment systems. The first shows the current rating/ranking system, the second shows the original rating/ranking system, and the third compares or superimposes the two.

As of this date, there are six project sites under construction or in the final stages of design, that have been identified as Class (2) {need repair} under the old system. They would have been rated the same under the new system.

Duane Dodds
September 10, 1999
Page 3

There were several sites around Rochester which had significant tree damage from the September 1998 wind storm. Many areas were not cleared or restored prior to the fall inspection, thus we recommend a follow up inspection in the Fall of 1999 to evaluate embankment conditions as a result of tree blow downs (root systems remove a large portion of earth) or the clean-up operations. It is because of this type of damage that past inspection reports recommended that trees be removed from the embankment slopes, as required by dam maintenance guidelines. Currently, the Canal Corporation is seeking input from the parties involved in dam design & evaluation to develop a method to address all the existing woody growth (trees and bushes) and the resulting root system.

If you have any questions, call T. Minnitti @ 457-4782.

Sincerely,

WESLEY P. MOODY, Director
Geotechnical Engineering Bureau

ORIGINAL SIGNED BY
E. A. WALTON

By: _____
Phillip A. Walton
Associate Soils Engineer

PAW/AM/DJB
Attachments

c: Paul J. Mack, Director, Technical Services Division, 7A-210, MC 0862

1998 - RISK ASSESSMENT SYSTEM

PARAMETER	WEIGHTED FACTORS	0	1						RANK
SEEPAGE	5								
	CRITERIA	NONE	MOIST AREA			3	BLEEDING	5	SEEPAGE
TOP WIDTH	Description		SOFT TO WALK ON				CATTAILS ON SLOPE	**	
	3	0	1	2	4	3		5	
(SEE TABLE "A" ATTACHED)	CRITERIA	EQUAL TO OR GREAT OR THAN	LESS BY 5'	LESS BY 10'	LESS BY 15'		LESS BY 20'	LESS THAN 5' WIDE **	
	1	0	1	2	3	4			
OUTBOARD EMBANKMENT HEIGHT	1	0	1	2	3	4		5	
	CRITERIA	LESS THAN 5'	5'	10'	15'	20'		GREATER THAN 20'	
OUTBOARD SLOPE	3	0		2		4		5	
	CRITERIA	1V ON 3H OR FLATTER		1 ON 2		1 ON 1		STEEPER THAN 1 ON 1	
OUTBOARD SLOPE GROWTH	1	0		2		4		5	
	CRITERIA	GRASS		WOODY GROWTH		TREES		COMPLETELY OVERGROWN	
INBOARD SLOPE CONDITION (1V ON 2H STANDARD)	1	0	1			3		5	
	CRITERIA	RIP-RAP IN PLACE	SLOPE STABLE			SLOUGHING		ERODED	
ADJACENT TERRAIN	1	0	1		3			5	
	CRITERIA	LAND SLOPES UPHILL	WOODED-NO HOMES VISIBLE		ACTIVE FARMLAND			DEVELOPED	
<div> <div>** NOTIFY CANAL SUPERINTENDENT IMMEDIATELY</div> <div>PLEASE PROVIDE COMMENTS BELOW IF A FIELD CONDITION EXISTS WHICH IS NOT ACCOUNTED FOR WITHIN THE TABLE (e.g. SLOUGHING, EROSION, DISTRESSED STRUCTURE, etc.).</div> </div>									
<div> <div>1= Immediate emergency contract recommended</div> <div>2= Begin monitoring system and schedule repairs soon</div> <div>3= Should be improved prior to next 5 year inspection</div> <div>4= Should be improved as part of normal scheduling</div> <div>5= Satisfactory but shows signs of aging</div> <div>6= Normal aging</div> <div>7= No Deterioration</div> </div>									
RATING SYSTEM							TOTAL		
RATING									

FIGURE 1 - EMBANKMENT RATING SYSTEM REVISED IN 1998

RISK ASSESSMENT

PARAMETER	WEIGHTED POINTS				* INSPECTOR'S RANKING
	* NOTE: INTERPOLATION BETWEEN POINTS IS BASED UPON THE INSPECTOR'S OBSERVATIONS				
SEEPAGE	1-----> NONE	6-----> BLEEDING	36-----> FLOWING WATER	216 FLOWING WATER CARRYING FINES **	
OUTBOARD SLOPE	1-----> 1V ON 3H OR FLATTER	4-----> STEEPER THAN 1V ON 3H	16-----> STEEPER THAN 1V ON 2H	64 1V ON 1H OR STEEPER	
EMBANKMENT HEIGHT	1-----> 5'	4-----> 10'	16-----> 15'	64 20' OR GREATER	
TOP WIDTH	1-----> > OR= TO TABLE "A"	4-----> < TABLE "A" BY 5'	16-----> < TABLE "A" BY 15'	64 < TABLE "A" BY MORE THAN 15' OR LESS THAN 10' WIDE	
ADJACENT TERRAIN	1-----> UNDEVELOPED	4-----> ACTIVE FARMLAND	16-----> SPARSELY DEVELOPED	64 DENSELY DEVELOPED	
	** NOTIFY CANAL SUPERINTENDENT IMMEDIATELY PLEASE PROVIDE COMMENTS BELOW AND ENTER APPROPRIATE POINTS IF A FIELD CONDITION EXISTS WHICH IS NOT ACCOUNTED FOR WITHIN THE TABLE (e.g. SLOUGHING, EROSION, DISTRESSED STRUCTURE, etc.). _____ _____ _____ _____ _____				
					TOTAL

FIGURE 2 - RATING FORM USED IN 1987 AND 1993 INSPECTIONS

1998 - RISK ASSESSMENT SYSTEM COMPARISON TO PREVIOUS RATING SYSTEM

PARAMETER	WEIGHTED FACTORS	5	0	5	15	25	RANK
SEEPAGE	CRITERIA	NONE	MOIST AREA	BLEEDING	SEEPAGE		
	Description		SOFT TO WALK ON	CATTAILS ON SLOPE	**		
TOP WIDTH (SEE TABLE "A" ATTACHED)	3	0	3	6	35	36	216
	CRITERIA	EQUAL TO OR GREAT OR THAN	LESS BY 5'	LESS BY 10'	LESS BY 20'	LESS THAN 5' WIDE	**
OUTBOARD EMBANKMENT HEIGHT	1	1	4	15	16	64	
	CRITERIA	LESS THAN 5'	5'	10'	15'	20'	GREATER THAN 20'
OUTBOARD SLOPE VERTICAL ON ?? HORIZONTAL	3	0	1	2	4	5	
	CRITERIA	1V ON 3H OR FLATTER	1V ON 3H OR FLATTER	1V ON 3H OR FLATTER	1V ON 3H OR FLATTER	1V ON 3H OR FLATTER	1V ON 3H OR FLATTER
OUTBOARD SLOPE GROWTH	1	0	GRASS	WOODY GROWTH	TREES	COMPLETELY OVERGROWN	
INBOARD SLOPE CONDITION (1V ON 2H STANDARD)	1	0	RIP-RAP IN PLACE	SLOPE STABLE	SLUGHING	ERODED	
ADJACENT TERRAIN	1	0	LAND SLOPES UPHILL	WOODED-NO HOMES VISIBLE	ACTIVE FARMLAND	DEVELOPED	
	CRITERIA	1	3	4	15	16	64

** NOTIFY CANAL SUPERINTENDENT IMMEDIATELY

RATING SYSTEM

TOTAL

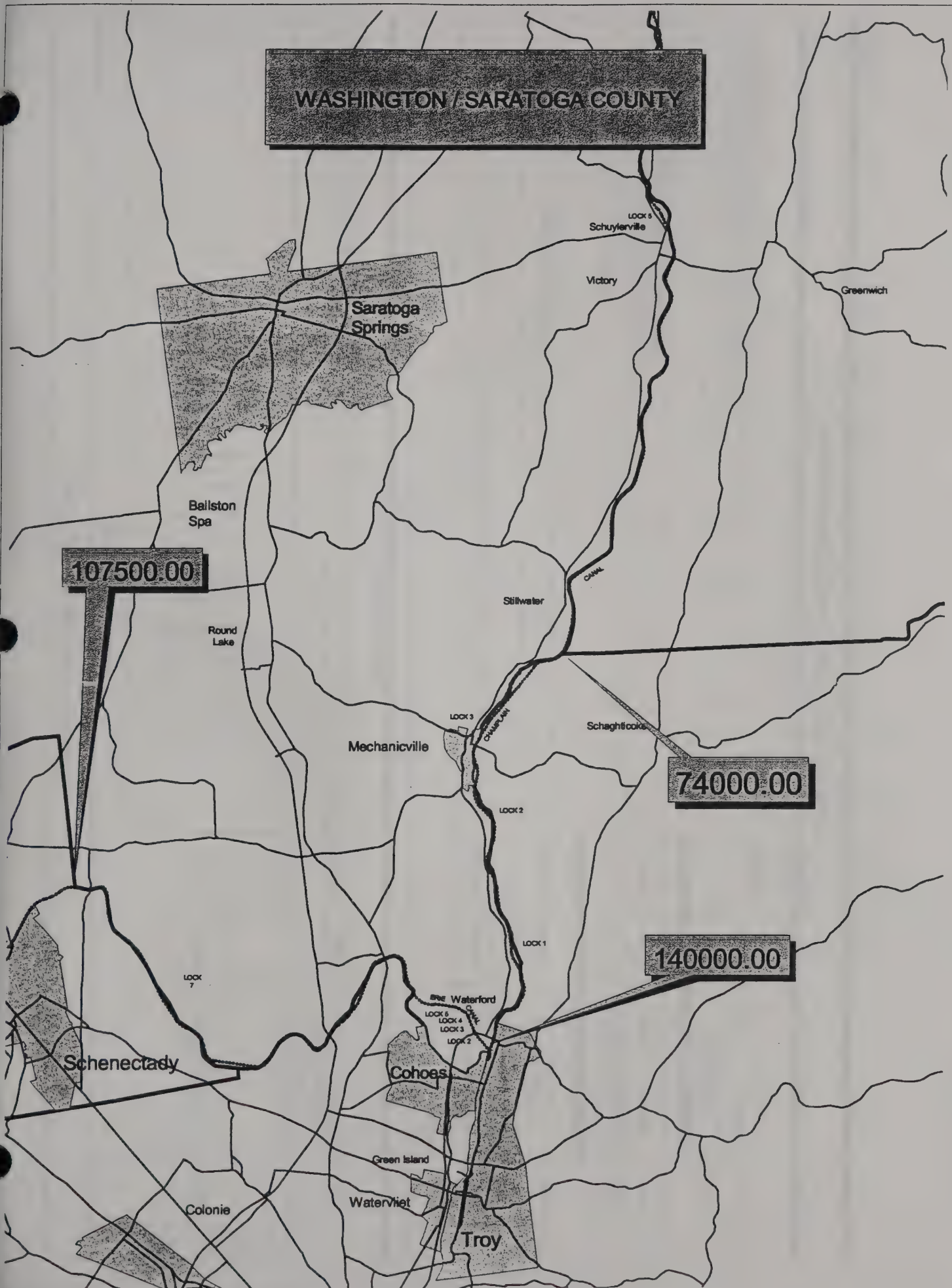
- 1= Immediate emergency contract recommended
- 2= Begin monitoring system and schedule repairs soon
- 3= Should be improved prior to next 5 year inspection
- 4= Should be improved as part of normal scheduling
- 5= Satisfactory but shows signs of aging
- 6= Normal aging
- 7= No Deterioration

RATING

FIGURE 3 - COMPARISON OF THE TWO RATING SYSTEMS

Date	Description	Debit	Credit
1890	Jan 1 Balance	100.00	
Feb	2 Paid for rent	25.00	
Mar	3 Received from John		50.00
Apr	4 Paid for groceries	15.00	
May	5 Received from Mary		30.00
Jun	6 Paid for fuel	20.00	
Jul	7 Received from Peter		40.00
Aug	8 Paid for insurance	10.00	
Sep	9 Received from Robert		60.00
Oct	10 Paid for repairs	18.00	
Nov	11 Received from Susan		25.00
Dec	12 Paid for taxes	35.00	
Total		208.00	208.00
Balance	Dec 31	100.00	

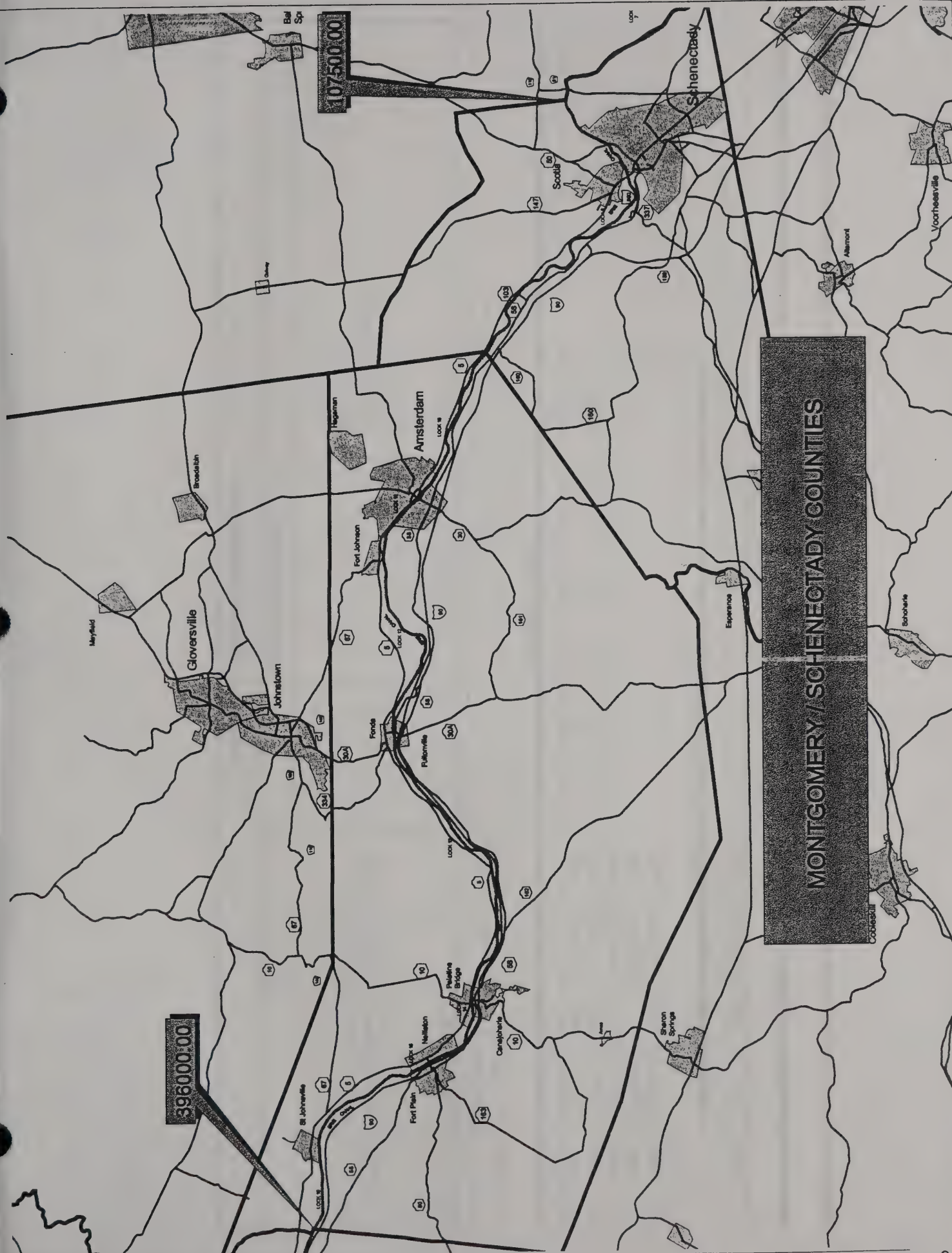
WASHINGTON / SARATOGA COUNTY



SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING		OFFSET	COUNTY	RISK ASSESSMENT										COMMENTS
		FROM	TO			SEEPA AGE	WIDTH TOP	EMBANKMENT OUTBOARD	HEIGHT OUTBOARD	SLOPE OUTBOARD	GROWTH OUTBOARD	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING	
1	ALB-1	CHAMPLAIN CANAL		EAST & WEST SIDE	WASHINGTON	0	9	3	12	2	0	0	0	26	5	Site directly North of Lock C-6. Old canal at toe.
		165+50	170+00													
WASHINGTON COUNTY																
		CHAMPLAIN CANAL														
1	ALB-1	897+50 (Lock C-3)		WESTSIDE	SARATOGA	0	0	2	6	0	0	0	0	8	7	
		OLD CHAMPLAIN CANAL														
1	ALB-1	in WATERFORD		EASTSIDE	SARATOGA	0	0	0	0	4	1	5	10	7	Fulton ST. to G.E. Landfill	
1	ALB-1	GLEN FALLS FEEDER														
1	ALB-1	96+00	168+00	SOUTHSIDE	SARATOGA	15	0	5	6	2	0	1	29	2	Rt 4 to Quaker Rd- Wet along toe of slope - Comment and drawing with inspection form	
1	ALB-2	ERIE CANAL														
1	ALB-2	234+00	242+00	NORTHSIDE	SARATOGA	5	0	4	6	2	0	5	22	6	Lock E-4, Boil visible within lock - Wet along toe of slope. Comments and drawing with inspection form	

WASHINGTON AND SARATOGA COUNTIES-VARIOUS CANALS



MONTGOMERY / SCHENECTADY COUNTIES

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING		OFFSET	COUNTY	RISK ASSESSMENT										COMMENTS
						SEE PAGE	T O P	W I D T H	O U T B O A R D	E M B A N K M E N T	H E I G H T	O U T B O A R D	S L O P E	O U T B O A R D	G R O W T H	

1	ALB-2	ERIE CANAL 840+00 (Lock E-7)		SOUTHSIDE	SCHENECTADY	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	7	Core wall
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SCHENECTADY COUNTY

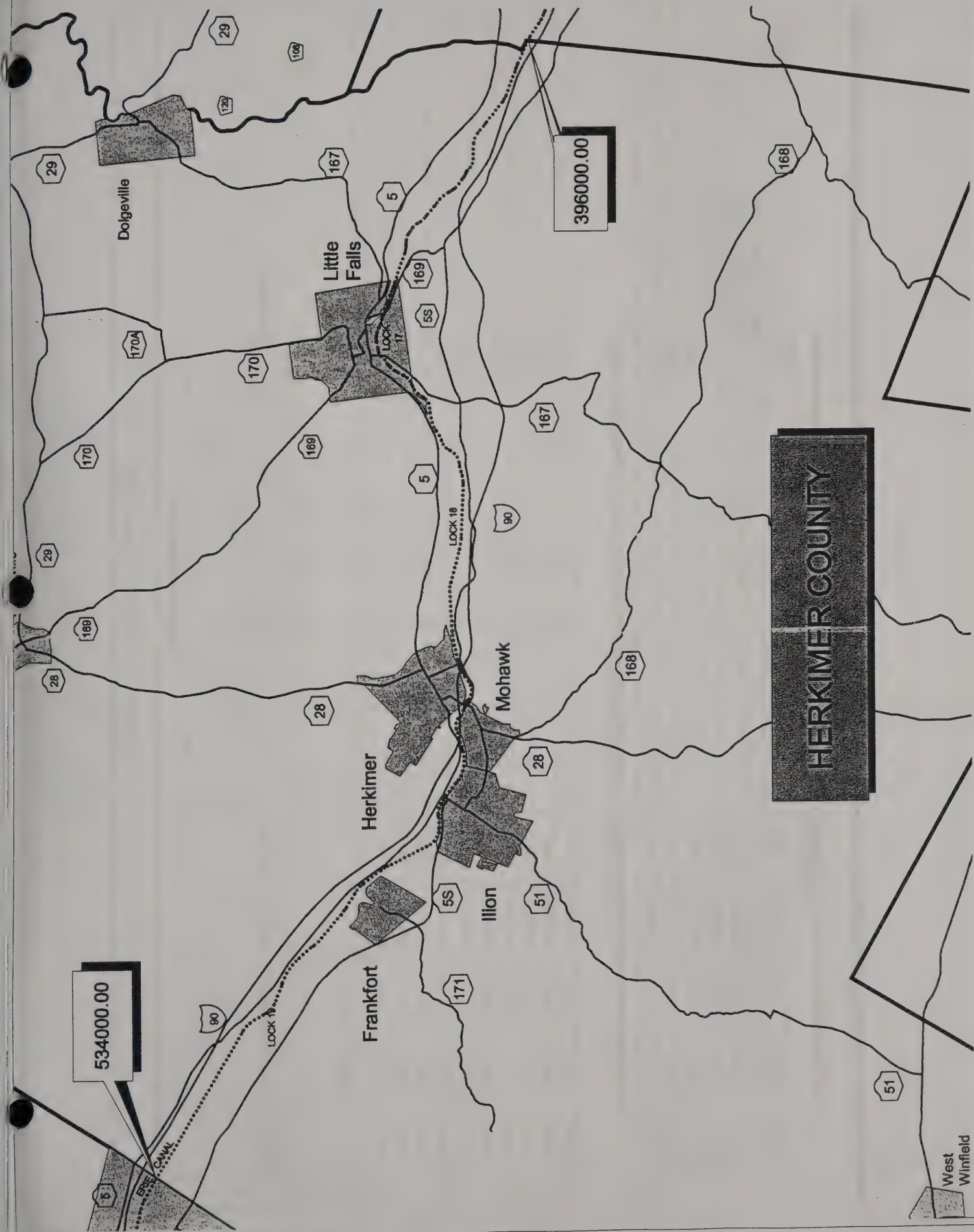
2	SYR-4	3873	3882	SOUTHSIDE	MONT															0	6	
2	SYR-4	3882	3882+50	SOUTHSIDE	MONT	0	3	3					3		2		2		2	15	3	
2	SYR-4	3882+50	3925	SOUTHSIDE	MONT																6	
2	SYR-4	3890+52-4088		SOUTHSIDE	MONT																6	
2	SYR-4	3882+50	3925	SOUTHSIDE	MONT																6	

MONTGOMERY COUNTY - ERIE CANAL - SOUTH

2	SYR-4	3873	4085	NORTHSIDE	MONT																6	
---	-------	------	------	-----------	------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

MONTGOMERY COUNTY - ERIE CANAL - NORTH

SCHENECTADY AND MONTGOMERY COUNTIES



SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING		OFFSET	COUNTY	RISK ASSESSMENT								COMMENTS
		FROM	TO			SEE PAGE	TOP WITH	OUTBOARD EMBANKMENT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL RATING	
2	SYR-4	4520	4601	SOUTHSIDE	HERK								0	6
2	SYR-4	4764	4781	SOUTHSIDE	HERK									6
2	SYR-4	4970	5150	SOUTHSIDE	HERK								0	6
2	SYR-4	5170	5340+65	SOUTHSIDE	HERK								0	6
2	SYR-4	5301+96	5346	SOUTHSIDE	HERK									6
2	SYR-4	5346	5347	SOUTHSIDE	HERK	0	3	3	3	2	1	1	13	5
2	SYR-4	5347	5419	SOUTHSIDE	HERK									6
2	SYR-4	5441	5504	SOUTHSIDE	HERK									6
2	SYR-4	5642	5835	SOUTHSIDE	HERK									6
2	SYR-4	5842	5919	SOUTHSIDE	HERK									6
HERKIMER COUNTY - ERIE CANAL - SOUTHSIDE														
2	SYR-4	4520	4572	NORTHSIDE	HERK									6
2	SYR-4	4572	4572+50	NORTHSIDE	HERK	0	4	3	3	2	4	1	17	2
2	SYR-4	4572+50	4656	NORTHSIDE	HERK									6
2	SYR-4	4656	4658	NORTHSIDE	HERK								*	SURVEY SECTIONS TAKEN
2	SYR-4	4658	4669+50	NORTHSIDE	HERK								*	SURVEY SECTIONS TAKEN
2	SYR-4	4669+50	4670+50	NORTHSIDE	HERK	4	3	3	3	3	0	0	*	SURVEY SECTIONS TAKEN
2	SYR-4	4670+50	4718	NORTHSIDE	HERK								6	
HERKIMER COUNTY - ERIE CANAL - NORTHSIDE														
* = under design														

HERKIMER COUNTY - ERIE CANAL

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING	OFFSET	COUNTY	RISK ASSESSMENT										COMMENTS		
					FROM	TO	SEE PAGE	TOP	WIDTH	OUTBOARD	EMBANKMENT	HEIGHT	OUTBOARD	SLOPE		OUTBOARD	GROWTH

2	SYR-4	5301+96	5346	SOUTHSIDE	ONEIDA															0	5	5	
2	SYR-4	5346	5347	SOUTHSIDE	ONEIDA	0	3			3		3		1	2		1		1	13	2	2	RECOMMEND PERIODIC MAINT. OF SLOPES
2	SYR-4	5347	5419	SOUTHSIDE	ONEIDA															0	5	5	
2	SYR-4	5441	5504	SOUTHSIDE	ONEIDA															0	5	5	
2	SYR-4	5642	5835	SOUTHSIDE	ONEIDA															0	5	5	
2	SYR-4	5842	5919	SOUTHSIDE	ONEIDA															0	5	5	
2	SYR-4				ONEIDA															0	5	5	

ONEIDA COUNTY - ERIE CANAL - SOUTH

2	SYR-4	5441	5504	NORTHSIDE	ONEIDA																6	6	
2	SYR-4	5768	5833	NORTHSIDE	ONEIDA																6	6	
2	SYR-4	5881	5881	NORTHSIDE	ONEIDA																6	6	
2	SYR-4	5730	5745	SOUTHSIDE	ONEIDA																6	6	Added since last inspection as result of minor leak-minimum embankment at site.

ONEIDA COUNTY - ERIE CANAL - NORTH

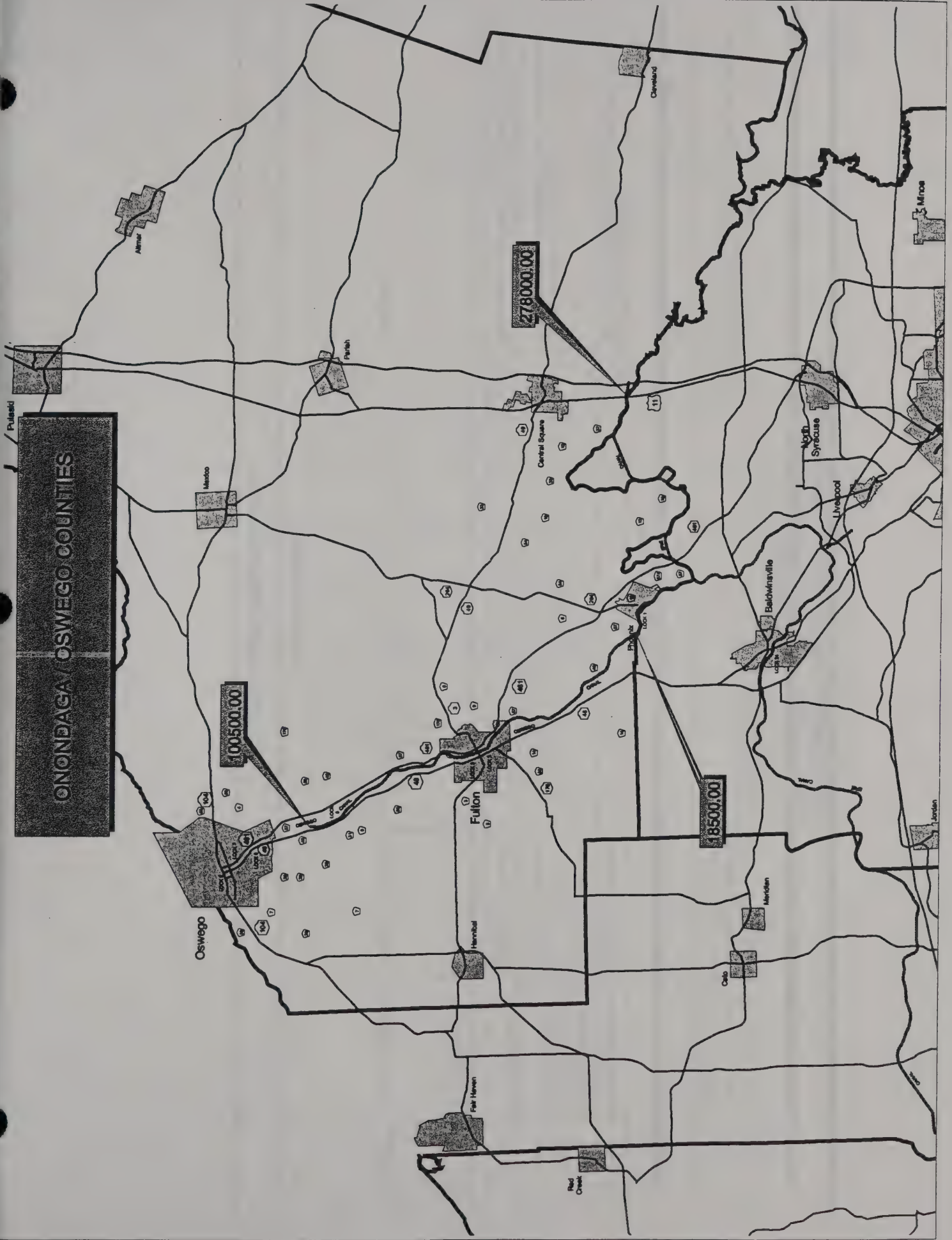
2	SYR-4	NINE MILE		SOUTHSIDE/NORTHSIDE	ONEIDA																6	6	W. CANADA CRK. TO N. GAGE RD. (REMSON QUAD).
2	SYR-4	NINE MILE		SOUTHSIDE/NORTHSIDE	ONEIDA																6	6	N. GAGE RD. TO NINE MILE CRK. (S. TRENTON QUAD).

ONEIDA COUNTY - NINE MILE

ONEIDA COUNTIES - VARIOUS CANALS

Date	Description	Debit	Credit	Balance	Total	Total	Total
1/1/20	Opening Balance			100.00			
1/2/20	Sales		50.00	150.00			
1/3/20	Expenses	20.00		130.00			
1/4/20	Sales		30.00	160.00			
1/5/20	Expenses	10.00		150.00			
1/6/20	Sales		40.00	190.00			
1/7/20	Expenses	15.00		175.00			
1/8/20	Sales		25.00	200.00			
1/9/20	Expenses	12.00		188.00			
1/10/20	Sales		35.00	223.00			
1/11/20	Expenses	18.00		205.00			
1/12/20	Sales		45.00	250.00			
1/13/20	Expenses	22.00		228.00			
1/14/20	Sales		30.00	258.00			
1/15/20	Expenses	14.00		244.00			
1/16/20	Sales		40.00	284.00			
1/17/20	Expenses	16.00		268.00			
1/18/20	Sales		20.00	288.00			
1/19/20	Expenses	10.00		278.00			
1/20/20	Sales		12.00	290.00			
1/21/20	Expenses	8.00		282.00			
1/22/20	Sales		18.00	300.00			
1/23/20	Expenses	11.00		289.00			
1/24/20	Sales		25.00	314.00			
1/25/20	Expenses	13.00		301.00			
1/26/20	Sales		32.00	333.00			
1/27/20	Expenses	17.00		316.00			
1/28/20	Sales		28.00	344.00			
1/29/20	Expenses	15.00		329.00			
1/30/20	Sales		35.00	364.00			
1/31/20	Expenses	19.00		345.00			
1/32/20	Sales		42.00	387.00			
1/33/20	Expenses	21.00		366.00			
1/34/20	Sales		38.00	404.00			
1/35/20	Expenses	23.00		381.00			
1/36/20	Sales		45.00	426.00			
1/37/20	Expenses	25.00		401.00			
1/38/20	Sales		50.00	451.00			
1/39/20	Expenses	27.00		424.00			
1/40/20	Sales		55.00	479.00			
1/41/20	Expenses	30.00		449.00			
1/42/20	Sales		60.00	509.00			
1/43/20	Expenses	33.00		476.00			
1/44/20	Sales		65.00	541.00			
1/45/20	Expenses	36.00		505.00			
1/46/20	Sales		70.00	575.00			
1/47/20	Expenses	39.00		536.00			
1/48/20	Sales		75.00	611.00			
1/49/20	Expenses	42.00		569.00			
1/50/20	Sales		80.00	649.00			
1/51/20	Expenses	45.00		604.00			
1/52/20	Sales		85.00	689.00			
1/53/20	Expenses	48.00		641.00			
1/54/20	Sales		90.00	731.00			
1/55/20	Expenses	51.00		680.00			

ONONDAGA / OSWEGO COUNTIES

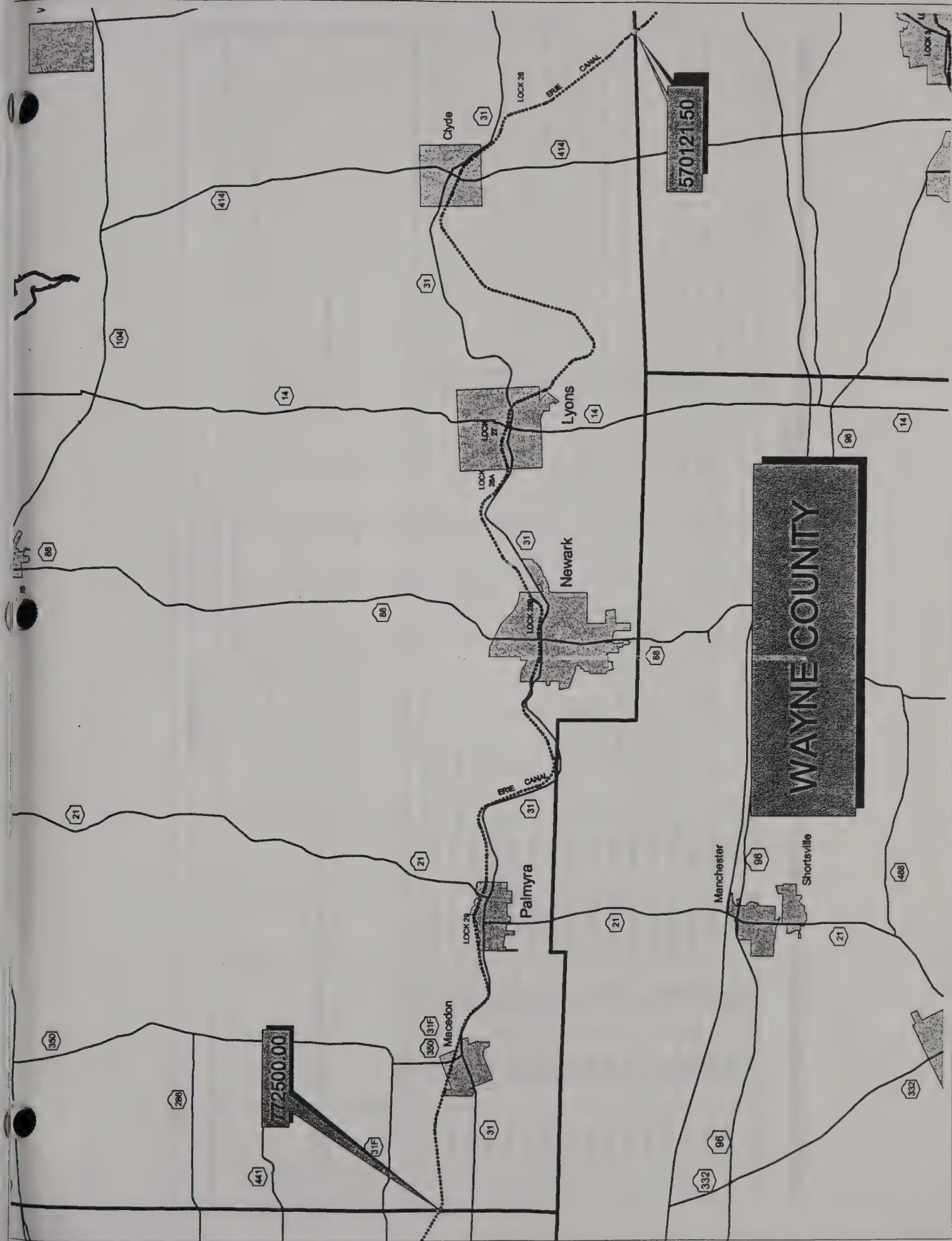


SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING		OFFSET	COUNTY	RISK ASSESSMENT										COMMENTS		
						SEE PAGE	T O P W I D T H	O U T B O A R D E M B A N K M E N T	O U T B O A R D S L O P E	O U T B O A R D G R O W T H	I N B O A R D S L O P E	A D J A C E N T T E R R A I N	T O T A L	R A T I N G				
3	SYR-5	OLD ERIE CANAL		SOUTHSIDE/ NORTHSIDE	ONONDAGA												5	EROSION OF OUTBOARD TOE AT CULVERT. RECOMMEND FACING BOTTOM THIRD WITH SLOPE PROTECTION
3	SYR-4	OLD ERIE CANAL		SOUTHSIDE/ NORTHSIDE	ONONDAGA												6	SITE LIMITS ARE FROM APPROX. 2550' W. OF BURDICK RD. TO ERIE CANAL AT NEW LONDON
3	SYR-5	OLD ERIE FEEDER		SOUTHSIDE/ NORTHSIDE	ONONDAGA												6	
3	SYR-5	OLD ERIE FEEDER		SOUTHSIDE/ NORTHSIDE	ONONDAGA												6	BUTTERNUT CREEK. 1000'+/- SOUTH OF OLD ERIE TO OLD ERIE NEAR NORTHSIDE 481
ONONDAGA COUNTY																		
3	OSWEGO CANAL																	
	SYR-5	505	605	EASTSIDE	OSWEGO												6	CITY OF FULTON, SOUTH OF L-2; CANAL IS IN OSWEGO RIVER IN THIS AREA
OSWEGO COUNTY																		

ONONDAGA AND OSWEGO COUNTIES - VARIOUS CANALS



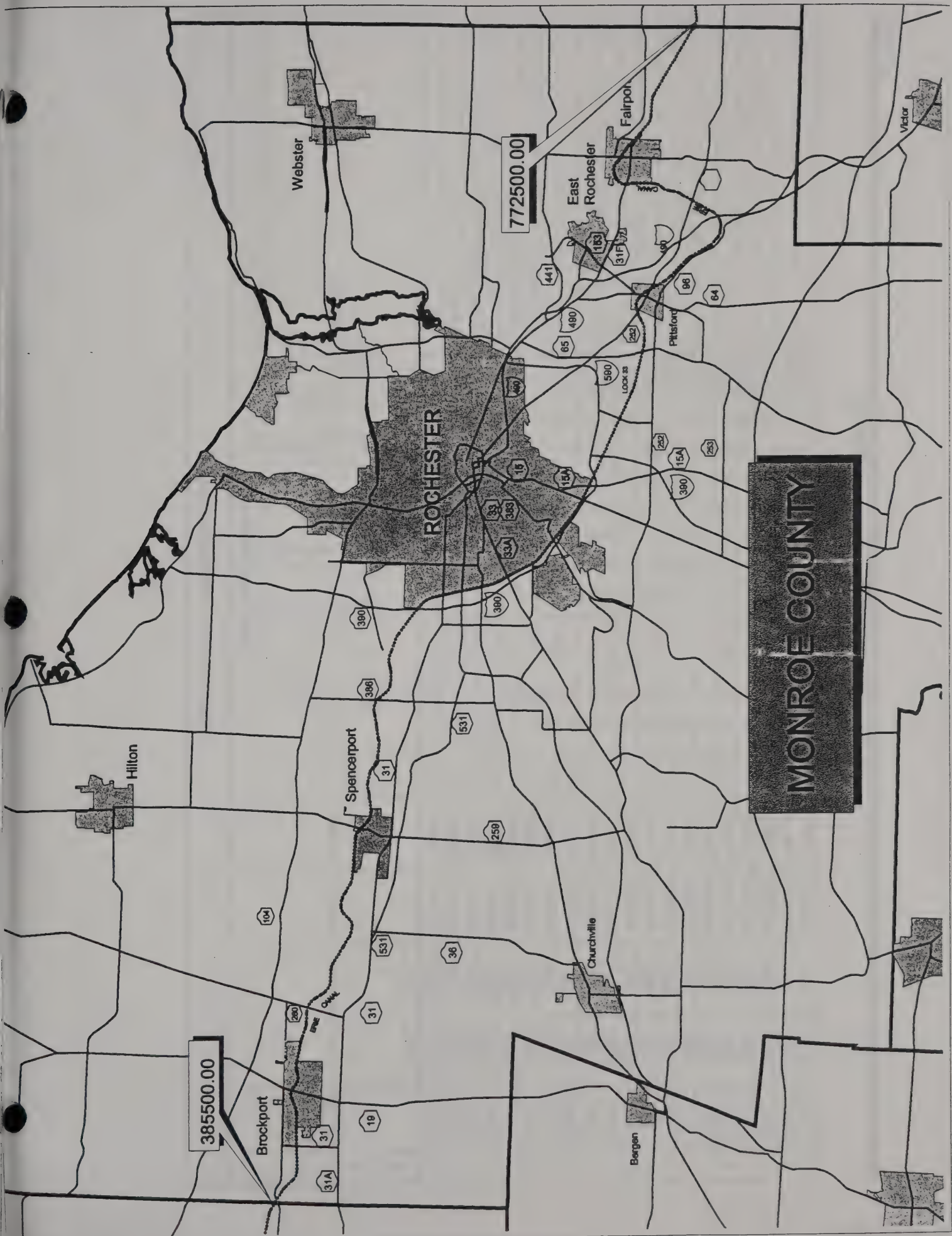


SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING		OFFSET	COUNTY	RISK ASSESSMENT										COMMENTS						
						SEE PAGE	TOP	WIDTH	OUTBOARD	EMBANKMENT	OUTBOARD	SLOPE	OUTBOARD	GROWTH	INBOARD		SLOPE	ADJACENT	TERRAIN	TOTAL	RATING	
4	SYR-6	6633	6710	NORTHSIDE	WAYNE																6	
4	SYR-6	6710+/-	6710+/-	NORTHSIDE	WAYNE	4	0	2	2	2											12	5
4	SYR-6	6710	6716	NORTHSIDE	WAYNE																	6
4	SYR-6	6716+/-	6716+/-	NORTHSIDE	WAYNE																	6
4	SYR-6	6716	6737	NORTHSIDE	WAYNE																	6
4	SYR-6	6711	6737	NORTHSIDE	WAYNE																	6
4	SYR-6	6753	6811	NORTHSIDE	WAYNE																	6
4	SYR-6	7216	7218	NORTHSIDE	WAYNE	4	0	1	0	0	0	0	1							6	5	
4	SYR-6	7538	7607	NORTHSIDE	WAYNE																6	
4	SYR-6	7538	7559	NORTHSIDE	WAYNE																6	
4	SYR-6	7559	7591	NORTHSIDE	WAYNE																6	
4	SYR-6	7591	7627	NORTHSIDE	WAYNE																6	
4	SYR-6	7607	7608	NORTHSIDE	WAYNE	1	3	2	4	2		1	2							15	5	
4	SYR-6	7627	7660	NORTHSIDE	WAYNE																	6
4	SYR-6	7660	7693	NORTHSIDE	WAYNE																	6
4	SYR-6	7693	7698	NORTHSIDE	WAYNE																	6
4	SYR-6	7693	7398	NORTHSIDE	WAYNE																	6

WAYNE COUNTY - ERIE CANAL - NORTHSIDE

SUMMARY FOR 1998 INSPECTION																			
DOT REGION	DIVISION-SECTION	CANAL STATIONING		OFFSET	COUNTY	RISK ASSESSMENT										COMMENTS			
		FROM	TO			SEE PAGE	TOP	WIDTH	OUTBOARD	EMBANKMENT	OUTBOARD	SLOPE	OUTBOARD	GROWTH	INBOARD		SLOPE	ADJACENT	TERRAIN
4	SYR-6	6631	6639+50	SOUTHSIDE	WAYNE	0	0	3	2	2	0	4	11	5					
4	SYR-6	6639+50	6648	SOUTHSIDE	WAYNE									6					
4	SYR-6	6648 +/-	6648 +/-	SOUTHSIDE	WAYNE									5					
4	SYR-6	6649+50	6710	SOUTHSIDE	WAYNE									6					
4	SYR-6	6710 +/-	6710 +/-	SOUTHSIDE	WAYNE	4	3	3	3	2	1	1	17	4					
4	SYR-6	6710	6751	SOUTHSIDE	WAYNE									6					
4	SYR-6	7387	7400	SOUTHSIDE	WAYNE									6					
4	SYR-6	7400	7422	SOUTHSIDE	WAYNE									6					
WAYNE COUNTY - ERIE CANAL - SOUTHSIDE																			
3	SYR-6	oswego Canal-South of Lock 2		EASTSIDE										6					
WAYNE COUNTY - OSWEGO CANAL -- EASTSIDE																			
WAYNE COUNTY - ERIE (SOUTHSIDE) AND OSWEGO CANALS - NORTH AND SOUTH																			





SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING		OFFSET	COUNTY	RISK ASSESSMENT								COMMENTS
		FROM	TO			SEEPA GEE	WIDTH TOP	EMBANKMENT OUTBOARD	HEIGHT	OUTBOARD	OUTBOARD	OUTBOARD	OUTBOARD	
4	BUF-7	1925	2001	NORTHSIDE	MONROE	0	0	5	3	4	0	5	17	6
4	BUF-7	2001	2055	NORTHSIDE	MONROE	5	12	2	13	5	0	1	38	5
4	BUF-7	2064	2066	NORTHSIDE	MONROE	0	0	5	0	5	0	5	15	6
4	BUF-7	2067	2075	NORTHSIDE	MONROE	0	0	0	1	0	0	5	6	6
4	BUF-7	2085	2125	NORTHSIDE	MONROE									
4	BUF-7	2136	2170	NORTHSIDE	MONROE									
4	BUF-7	2225	2265	NORTHSIDE	MONROE	0	0	5	0	0	0	5	10	6
4	BUF-7	3050	3079	NORTHSIDE	MONROE	5	4	4	2	4	0	4	23	6
4	BUF-7	3107	3188	NORTHSIDE	MONROE	0	0	4	6	4	0	3	17	6
4	BUF-7	3220	3280	NORTHSIDE	MONROE	10	4	3	9	4	0	5	35	5
4	BUF-7	3300	3315	NORTHSIDE	MONROE	0	3	3	10	1	0	5	22	6
4	BUF-7	3315	3360	NORTHSIDE	MONROE	20	5	3	8	2	0	5	43	4
4	BUF-7	3360	3395	NORTHSIDE	MONROE	0	0	1	1	4	0	4	10	6
4	BUF-7	3400	3436	NORTHSIDE	MONROE	0	6	3	7	0	0	4	20	6
4	BUF-7	3441	3480	NORTHSIDE	MONROE	0	5	5	9	1	0	5	25	6
4	BUF-7	3520	3527	NORTHSIDE	MONROE	0	3	2	2	5	0	2	14	6
4	BUF-7	3572	3592	NORTHSIDE	MONROE	0	0	1	6	2	0	3	12	6
4	BUF-7	3610	3630	NORTHSIDE	MONROE	0	0	1	9	4	0	3	17	6
4	BUF-7	3630	3736	NORTHSIDE	MONROE	0	12	1	13	4	0	5	35	5
4	BUF-7	3742	3841	NORTHSIDE	MONROE	20	11	4	9	5	0	1	50	4

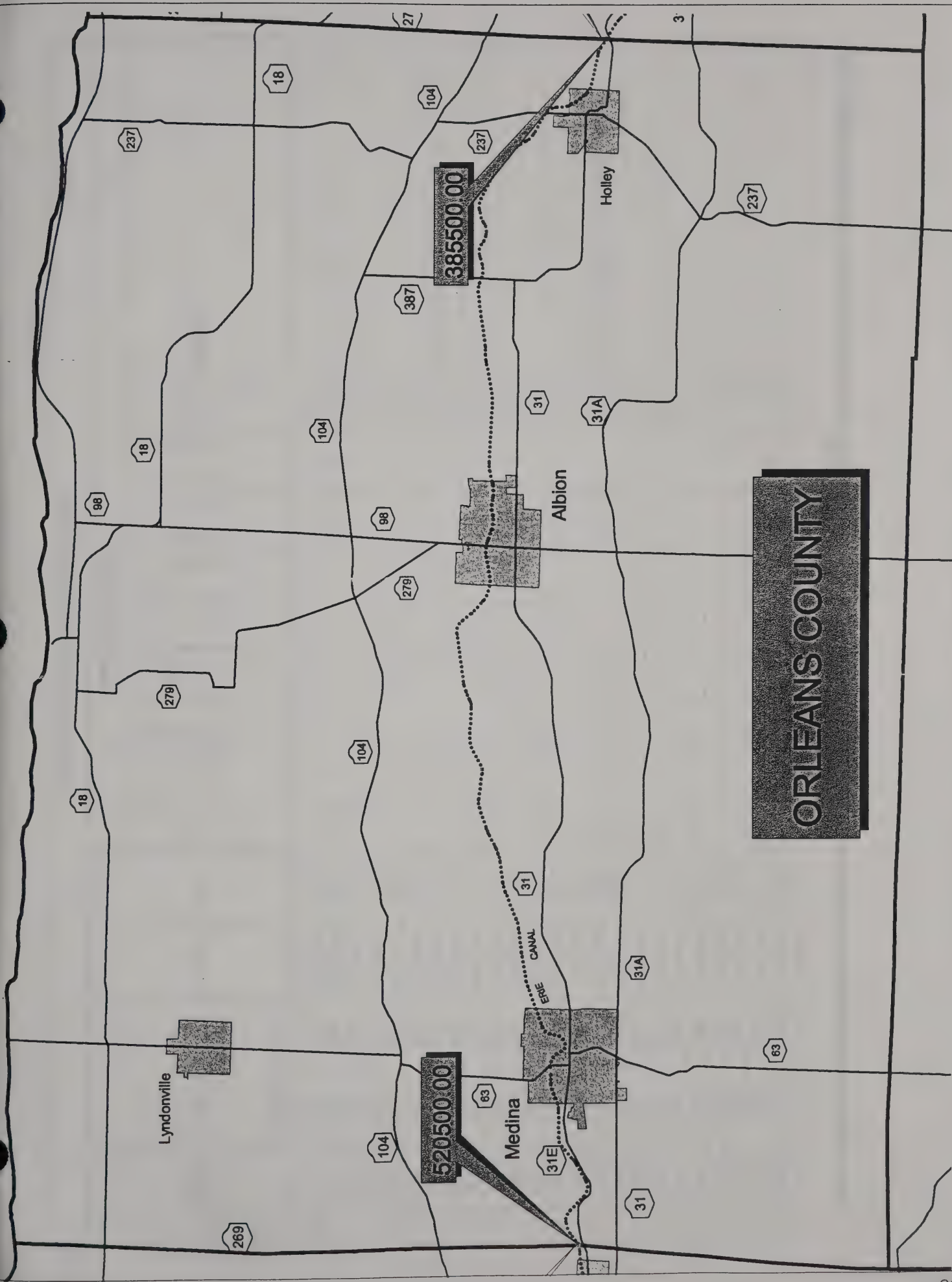
MONROE COUNTY - ERIE CANAL - NORTHSIDE

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING		OFFSET	COUNTY	RISK ASSESSMENT										COMMENTS
						SEE PAGE	WIDTH TO TOP	EMBANKMENT OUTBOARD	HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING	
4	BUF-7	2064	2066	SOUTHSIDE	MONROE	0	0	5		0	5	0	4	14	6	BUSHNELL BASIN SEWER SITE
4	BUF-7	2105	2140	SOUTHSIDE	MONROE											LARGE TREES DOWN-REINSPECT TO DETERMINE CLEANUP
4	BUF-7	2235	2305	SOUTHSIDE	MONROE	5	0	1		6	5	0	4	21	6	
4	BUF-7	3050	3072	SOUTHSIDE	MONROE	15	0	0		6	5	0	1	27	3	WATER LEVEL AT TOE EQUAL TO WATER IN CANAL
4	BUF-7	3173	3188	SOUTHSIDE	MONROE										?	NOT ACCESSABLE
4	BUF-7	3265	3282	SOUTHSIDE	MONROE	0	7	4		6	1	0	5	23	6	
4	BUF-7	3305	3311	SOUTHSIDE	MONROE	20	0	2		9	2	0	5	38	4	
4	BUF-7	3342	3350	SOUTHSIDE	MONROE	20	9	2		13	2	0	1	47	4	
4	BUF-7	3430	3445	SOUTHSIDE	MONROE	20	9	2		9	5	0	3	48	4	EAST OF ADAMS BASIN
4	BUF-7	3445	3480	SOUTHSIDE	MONROE	0	9	4		9	5	0	1	28	6	
4	BUF-7	3630	3645	SOUTHSIDE	MONROE	0	3	4		6	0	0	4	17	6	
4	BUF-7	3665	3670	SOUTHSIDE	MONROE	0	0	2		1	0	0	5	8	7	
4	BUF-7	3710	3725	SOUTHSIDE	MONROE	20	9	3		9	2	0	5	48	4	
4	BUF-7	3740	3768	SOUTHSIDE	MONROE	12	0	2		9	1	0	5	29	6	
4	BUF-7	3773	3823	SOUTHSIDE	MONROE	15	9	2		9	5	0	5	45	4	
4	BUF-7	3847	3890	SOUTHSIDE	MONROE	0	0	2		6	2	0	5	15	6	

MONROE COUNTY - ERIE CANAL - SOUTHSIDE

Date	Description	Amount	Total
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2098-2099
2099-2100



ORLEANS COUNTY

520500.00

385500.00

Lyndonville

Medina

Albion

Holley

ERIE
CANAL



SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING		OFFSET	COUNTY	RISK ASSESSMENT										COMMENTS					
						SEE PAGE	TOP	WIDTH	EMBANKMENT		OUTBOARD	SLOPE	OUTBOARD	GROWTH	INBOARD		SLOPE	ADJACENT	TERRAIN	TOTAL	RATING
									OUTBOARD	HEIGHT											
4	BUF-7	3860	3895	NORTHSIDE	ORLEAN	0	0	0	2	9	5	0	0	0	0	0	16	6			
4	BUF-7	3905	3929	NORTHSIDE	ORLEAN	0	0	0	5	3	4	0	0	0	0	0	12	6			
4	BUF-7	3930	3956	NORTHSIDE	ORLEAN												0	6			
4	BUF-7	3965	4024	NORTHSIDE	ORLEAN												0	6			
4	BUF-7	4074	4087	NORTHSIDE	ORLEAN												0	6			
4	BUF-7	4099	4123	NORTHSIDE	ORLEAN												0	6			
4	BUF-7	4134	4273	NORTHSIDE	ORLEAN												0	6			
4	BUF-7	4307	4409	NORTHSIDE	ORLEAN												0	6			
4	BUF-7	4409	4419	NORTHSIDE	ORLEAN	0	12	4	4	12	4	0	5	37	6						
4	BUF-7	4420	4494	NORTHSIDE	ORLEAN									0	6						
4	BUF-7	4510	4523	NORTHSIDE	ORLEAN	5	9	4	4	9	4	0	0	31	5						
4	BUF-7	4523	4584	NORTHSIDE	ORLEAN									0	6						
4	BUF-7	4584	4590	NORTHSIDE	ORLEAN									0	6						
4	BUF-7	4590	4600	NORTHSIDE	ORLEAN									0	6						
4	BUF-7	4603	4607	NORTHSIDE	ORLEAN									0	6						
4	BUF-7	4615	4619	NORTHSIDE	ORLEAN	20	9	3	3	9	1	0	5	47	4						
4	BUF-7	4619	4687	NORTHSIDE	ORLEAN									0	6						
4	BUF-7	4687	4700	NORTHSIDE	ORLEAN	20	6	4	4	6	0	0	0	36	4						
4	BUF-7	4700	4780	NORTHSIDE	ORLEAN									0	6						
4	BUF-7	4780	4800	NORTHSIDE	ORLEAN	20	9	2	2	9	3	0	3	46	4						
4	BUF-7	4810	4850	NORTHSIDE	ORLEAN									0	6						
4	BUF-7	4852	4864	NORTHSIDE	ORLEAN									4	4						
4	BUF-7	4864	4900	NORTHSIDE	ORLEAN										6						
4	BUF-7	5006	5169	NORTHSIDE	ORLEAN									0	6						
4	BUF-7	5185	5206	NORTHSIDE	ORLEAN									0	6						

ORLEANS COUNTY - ERIE CANAL - NORTHSIDE

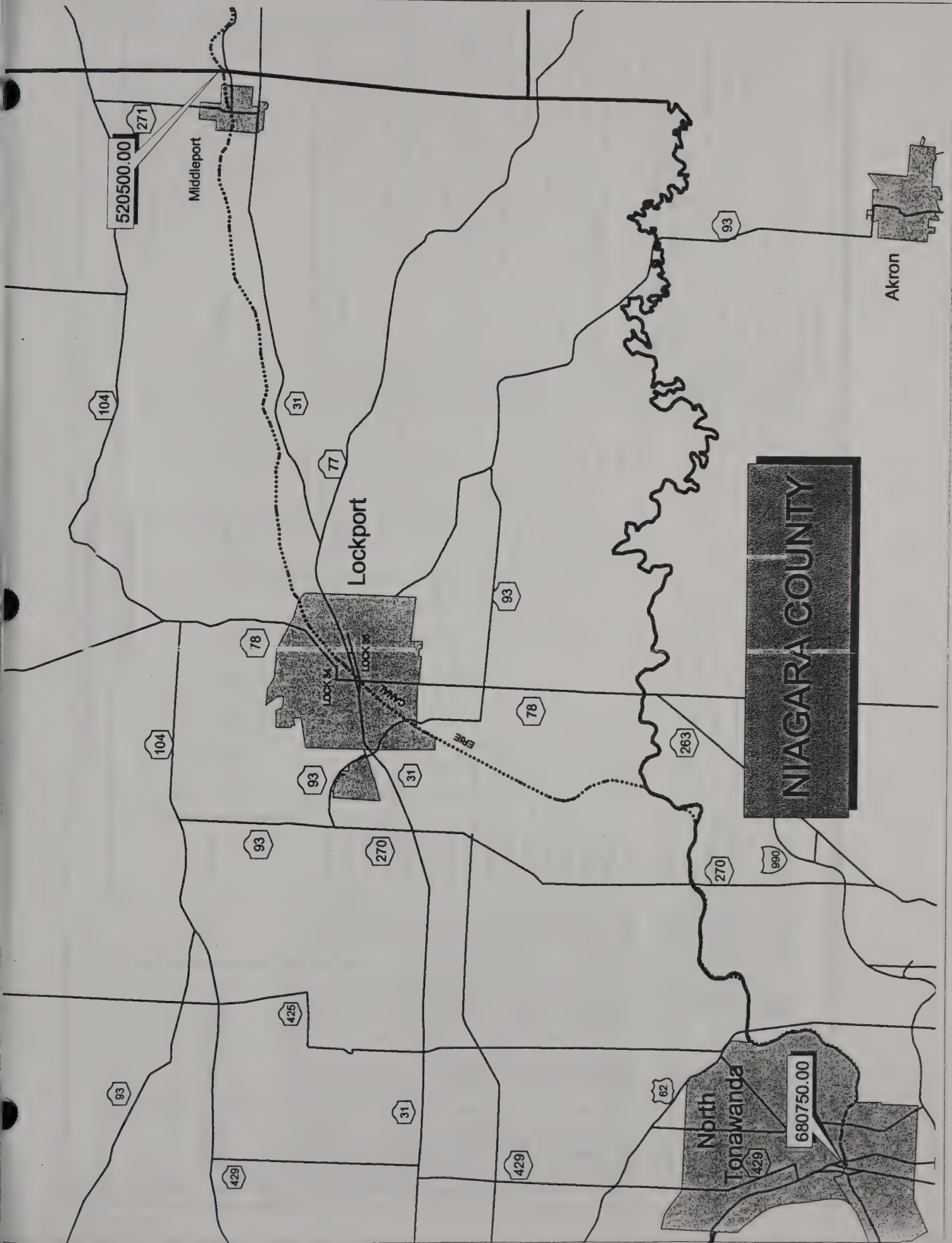
Date	Particulars	Debit	Credit	Balance
1891	Jan 1			100.00
Feb 1	To Cash	50.00		150.00
Mar 1	By Cash		25.00	175.00
Apr 1	To Cash	75.00		250.00
May 1	By Cash		100.00	350.00
Jun 1	To Cash	125.00		475.00
Jul 1	By Cash		150.00	625.00
Aug 1	To Cash	175.00		800.00
Sep 1	By Cash		200.00	1000.00
Oct 1	To Cash	225.00		1225.00
Nov 1	By Cash		250.00	1475.00
Dec 1	To Cash	275.00		1750.00
Total		1000.00	1000.00	1750.00

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING		OFFSET	COUNTY	RISK ASSESSMENT										COMMENTS						
		FROM	TO			SEE PAGE	TOP	WIDTH	OUTBOARD	EMBANKMENT	OUTBOARD	SLOPE	OUTBOARD	GROWTH	INBOARD		SLOPE	ADJACENT	TERRAIN	TOTAL	RATING	
4	BUF-7	3913	3925	SOUTHSIDE	ORLEAN															5	CULVERT #65-COUNTY LINE	
4	BUF-7	3930	3960	SOUTHSIDE	ORLEAN																5	CULVERT #66- TREE DAMAGE
	BUF-7	4250	4275	SOUTHSIDE	ORLEAN																6	AROUND CULVERTS #73 & 74-SMALL PONDS ADJACENT AT SAME ELEV.
4	BUF-7	4355	4395	SOUTHSIDE	ORLEAN																5	CULVERT #75 & 76
4	BUF-7	4409	4420	SOUTHSIDE	ORLEAN	0	0	0	15	3							3		21	4	THRU VILLAGE	
4	BUF-7	4450	4492	SOUTHSIDE	ORLEAN																5	CULVERT #82-NEEDS INBOARD WORK
4	BUF-7	4512	4528	SOUTHSIDE	ORLEAN																4	SHOULD DO STONE INBOARD WORK
4	BUF-7	4530	4540	SOUTHSIDE	ORLEAN																4	ENDS AT CULVERT #84
4	BUF-7	4579	4584	SOUTHSIDE	ORLEAN																6	ENDS AT WIDE WATERS
4	BUF-7	4584	4590	SOUTHSIDE	ORLEAN	0	0	0	15	3							0		18	4	TREES BLOWN DOWN-CULVERT #86	
4	BUF-7	4590	4595	SOUTHSIDE	ORLEAN																5	TREES BLOWN DOWN-NEAR WASTE WIER
4	BUF-7	4603	4611	SOUTHSIDE	ORLEAN																6	CULVERT #87
		3880	3882	SOUTHSIDE	ORLEAN																5	CULVERT #88- MIN. EMB.
4	BUF-7	4641	4650	SOUTHSIDE	ORLEAN																4	SLOUGHED INBOARD SLOPE
	BUF-7	4852	4864	SOUTHSIDE	ORLEAN	15	0	0	15	3							3		36	4	SECTION ENDS AT CULVERT #95-CULVERT LEAKS EVEN THOUGH RELINED	
4	BUF-7	4895	4900	SOUTHSIDE	ORLEAN																5	CULVERT #99-BEALS ROAD
4	BUF-7	5130	5131	SOUTHSIDE	ORLEAN																3	CULVERT #103-NEW SITE-SLOPE ADJACENT TO PIPE ERODED BY STREAM
4	BUF-7	5028	5150	SOUTHSIDE	ORLEAN																	

ORLEANS COUNTY - ERIE CANAL - SOUTHSIDE

No.	Name	Age	Sex	Remarks
1	John Smith	25	M	...
2	Mary Jones	22	F	...
3	James Brown	30	M	...
4	Sarah White	28	F	...
5	Robert Black	35	M	...
6	Elizabeth Green	20	F	...
7	William Hall	40	M	...
8	Anna King	24	F	...
9	Thomas Lee	32	M	...
10	Jane Taylor	26	F	...
11	Charles Wilson	38	M	...
12	Elizabeth Young	21	F	...
13	George Baker	45	M	...
14	Frances Adams	23	F	...
15	Henry Miller	33	M	...
16	Rebecca Scott	27	F	...
17	Samuel Davis	42	M	...
18	Abigail Clark	19	F	...
19	Benjamin Lewis	37	M	...
20	Harriet Walker	25	F	...
21	Isaac Hall	48	M	...
22	Jessie King	22	F	...
23	Joseph Wright	31	M	...
24	Katherine Green	29	F	...
25	Samuel Adams	41	M	...
26	Elizabeth Baker	20	F	...
27	Thomas Miller	36	M	...
28	Anna Scott	24	F	...
29	Charles Davis	43	M	...
30	Frances Clark	21	F	...
31	Henry Lewis	34	M	...
32	Rebecca Walker	26	F	...
33	Samuel Hall	44	M	...
34	Abigail King	18	F	...
35	Benjamin Wright	39	M	...
36	Harriet Green	23	F	...
37	Isaac Adams	46	M	...
38	Jessie Baker	22	F	...
39	Joseph Miller	32	M	...
40	Katherine Scott	28	F	...
41	Samuel Davis	47	M	...
42	Elizabeth Clark	20	F	...
43	Thomas Lewis	35	M	...
44	Anna Walker	25	F	...
45	Benjamin Hall	49	M	...
46	Harriet King	21	F	...
47	Isaac Wright	37	M	...
48	Jessie Green	24	F	...
49	Joseph Adams	40	M	...
50	Katherine Baker	19	F	...
51	Samuel Miller	33	M	...
52	Elizabeth Scott	27	F	...
53	Charles Davis	42	M	...
54	Frances Clark	23	F	...
55	Henry Lewis	36	M	...
56	Rebecca Walker	26	F	...
57	Samuel Hall	45	M	...
58	Abigail King	17	F	...
59	Benjamin Wright	38	M	...
60	Harriet Green	22	F	...
61	Isaac Adams	47	M	...
62	Jessie Baker	21	F	...
63	Joseph Miller	31	M	...
64	Katherine Scott	29	F	...
65	Samuel Davis	48	M	...
66	Elizabeth Clark	19	F	...
67	Thomas Lewis	34	M	...
68	Anna Walker	24	F	...
69	Benjamin Hall	49	M	...
70	Harriet King	20	F	...
71	Isaac Wright	37	M	...
72	Jessie Green	25	F	...
73	Joseph Adams	41	M	...
74	Katherine Baker	18	F	...
75	Samuel Miller	32	M	...
76	Elizabeth Scott	27	F	...
77	Charles Davis	43	M	...
78	Frances Clark	22	F	...
79	Henry Lewis	35	M	...
80	Rebecca Walker	26	F	...
81	Samuel Hall	44	M	...
82	Abigail King	16	F	...
83	Benjamin Wright	39	M	...
84	Harriet Green	23	F	...
85	Isaac Adams	46	M	...
86	Jessie Baker	21	F	...
87	Joseph Miller	30	M	...
88	Katherine Scott	28	F	...
89	Samuel Davis	47	M	...
90	Elizabeth Clark	19	F	...
91	Thomas Lewis	33	M	...
92	Anna Walker	24	F	...
93	Benjamin Hall	48	M	...
94	Harriet King	20	F	...
95	Isaac Wright	36	M	...
96	Jessie Green	25	F	...
97	Joseph Adams	40	M	...
98	Katherine Baker	17	F	...
99	Samuel Miller	31	M	...
100	Elizabeth Scott	26	F	...



SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING		OFFSET	COUNTY	RISK ASSESSMENT										ADJACENT TERRITORY	TOTAL RATING	COMMENTS
		FROM	TO			SEE PAGE	TO P	WIDTH	OUTBOARD	EMBANKMENT	OUTBOARD	SLOPE	OUTBOARD	GROWTH	SLOPE	INBOARD		
5	BUF-7	5206	5222	NORTHSIDE	NIAGARA	0	12	2	12	4	0	3	33	5				
5	BUF-7	5222	5240	NORTHSIDE	NIAGARA	0	9	3	9	3	0	3	27	5				
5	BUF-7	5276	5295	NORTHSIDE	NIAGARA	0	6	3	6	1	0	4	20	6				
5	BUF-7	5315	5325	NORTHSIDE	NIAGARA	10	9	5	6	2	0	4	36	4				
5	BUF-7	5332	5339	NORTHSIDE	NIAGARA	0	6	2	9	2	0	1	20	6				
5	BUF-7	5339	5354+50	NORTHSIDE	NIAGARA	0	9	5	6	1	0	1	22	5				
5	BUF-7	5354+50	5397	NORTHSIDE	NIAGARA	10	6	4	0	2	0	3	25	4				
5	BUF-7	5397	5415	NORTHSIDE	NIAGARA	0	12	5	9	5	0	3	34	4				
5	BUF-7	5415	5425	NORTHSIDE	NIAGARA	0	3	2	6	2	1	3	17	5				
5	BUF-7	5425	5436	NORTHSIDE	NIAGARA	0	3	2	6	4	0	1	16	5				
5	BUF-7	5436	5482	NORTHSIDE	NIAGARA	0	0	2	0	2	1	3	8	6				
5	BUF-7	5482	5489	NORTHSIDE	NIAGARA	0	0	5	6	1	0	2	14	5				
5	BUF-7	5489	5586	NORTHSIDE	NIAGARA	0	9	4	6	2	1	4	26	4				
5	BUF-7	5553	5559	NORTHSIDE	NIAGARA								*					under design-culvert #109
5	BUF-7	5586	5605	NORTHSIDE	NIAGARA	0	0	3	0	2	1	1	7	6				
5	BUF-7	5605	5614	NORTHSIDE	NIAGARA	0	0	3	6	4	0	1	14	6				
5	BUF-7	5645	5656	NORTHSIDE	NIAGARA	0	9	4	6	2	1	1	23	*				Under Design+Culvert #118(In-situ formed liner)=Buried concrete cut-off wall
5	BUF-7	5694	5700	NORTHSIDE	NIAGARA	0	3	2	3	1	1	4	14	5				
5	BUF-7	5700	5714	NORTHSIDE	NIAGARA	0	3	3	3	1	1	3	14	6				
5	BUF-7	5714	5730	NORTHSIDE	NIAGARA	0	9	4	6	3	0	2	24	5				
5	BUF-7	5730	5745	NORTHSIDE	NIAGARA	10	12	3	9	4	1	5	41	4				
5	BUF-7	5745	5756	NORTHSIDE	NIAGARA	0	6	2	9	0	0	4	21	5				
5	BUF-7	5756	5770	NORTHSIDE	NIAGARA	0	6	3	9	0	1	4	23	6				

* = under design

NIAGARA COUNTY - ERIE CANAL - NORTHSIDE

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING		OFFSET	COUNTY	RISK ASSESSMENT										COMMENTS		
						SEE PAGE	WIDTH TO TOP	EMBANKMENT		OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING			
								OUTBOARD	HEIGHT									
FROM	TO																	
5	BUF-7	5206	5222	SOUTHSIDE	NIAGARA												5	
5	BUF-7	5222	5240	SOUTHSIDE	NIAGARA	0	3	2	6						5	16	4	
5	BUF-7	5276	5295	SOUTHSIDE	NIAGARA													
5	BUF-7	5332	5339	SOUTHSIDE	NIAGARA	5	12	3	15						1	36	5	CULVERT #108- CATTAILS ON SLOPE
5	BUF-7	5339	5342+50	SOUTHSIDE	NIAGARA		?	?	?						?		*	CATTAILS ON TOE OF SLOPE
5	BUF-7	5397	5415	SOUTHSIDE	NIAGARA	0	15	5	12						1	33	2	WATSONS WASTE WEIR-UNDER DESIGN
5	BUF-7	5415	5425	SOUTHSIDE	NIAGARA												6	CULVERT #110-WRUCK ROAD
5	BUF-7	5425	5436	SOUTHSIDE	NIAGARA	0	15	4	12						1	32	2	STEEP OBOARD SLOPE-CULVERT #111
5	BUF-7	5436	5482	SOUTHSIDE	NIAGARA	5		1	6		0	0			0	12	6	VERY LOW EMBANKMENTS (4-5 FT.).
5	BUF-7	5482	5489	SOUTHSIDE	NIAGARA	0	9	3	6						1	19	*	CULVERT #113-UNDER DESIGN
5	BUF-7	5489	5586	SOUTHSIDE	NIAGARA												6	
5	BUF-7	5586	5605	SOUTHSIDE	NIAGARA												6	
5	BUF-7	5605	5614	SOUTHSIDE	NIAGARA	0	9	4	12						1	26	4	Inboard repairs completed
5	BUF-7	5645	5656	SOUTHSIDE	NIAGARA	5	15	5	12						5	42	4	CULVERT #118- OTHER SIDE OF INSITU-FORM
5	BUF-7	5694	5700	SOUTHSIDE	NIAGARA	0	15	3	12						4	34	4	CULVERT #119-SAND PIT & GROFF ROAD
5	BUF-7	5700	5714	SOUTHSIDE	NIAGARA												6	
5	BUF-7	5714	5730	SOUTHSIDE	NIAGARA	0	15	5	12						1	33	*	UNDER DESIGN - CULVERT #120
5	BUF-7	5730	5745	SOUTHSIDE	NIAGARA												6	
5	BUF-7	5745	5756	SOUTHSIDE	NIAGARA	5	25	3	12						1	46	4	CULVERT #121 EXTENDED
5	BUF-7	5756	5770	SOUTHSIDE	NIAGARA	0	0	2	0		4	0			1	7	6	CULVERT #122

* = under design

NIAGARA COUNTY - ERIE CANAL - SOUTHSIDE

	<div data-bbox="279 91 899 1328"> <p>THE UNIVERSITY OF CHICAGO</p> <p>LIBRARY</p> <p>540 EAST 57TH STREET</p> <p>CHICAGO, ILL. 60637</p> </div> <div data-bbox="279 1328 899 1952"> <p>UNIVERSITY OF CHICAGO</p> <p>LIBRARY</p> <p>540 EAST 57TH STREET</p> <p>CHICAGO, ILL. 60637</p> </div>	<div data-bbox="899 91 1292 1328"> <p>UNIVERSITY OF CHICAGO</p> <p>LIBRARY</p> <p>540 EAST 57TH STREET</p> <p>CHICAGO, ILL. 60637</p> </div> <div data-bbox="899 1328 1292 1952"> <p>UNIVERSITY OF CHICAGO</p> <p>LIBRARY</p> <p>540 EAST 57TH STREET</p> <p>CHICAGO, ILL. 60637</p> </div>
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Appendix

1998 CANAL IMPOUNDING EMBANKMENT INSPECTIONS

GENERAL INFORMATION

INSPECTORS

- a. GEB _____
 b. DOT REGION _____
 c. CANAL DIVISION _____

LOCATION

RESIDENCY SHEET

- 1 DIVISION _____
 2 SECTION _____
 3 SHEET NUMBER _____

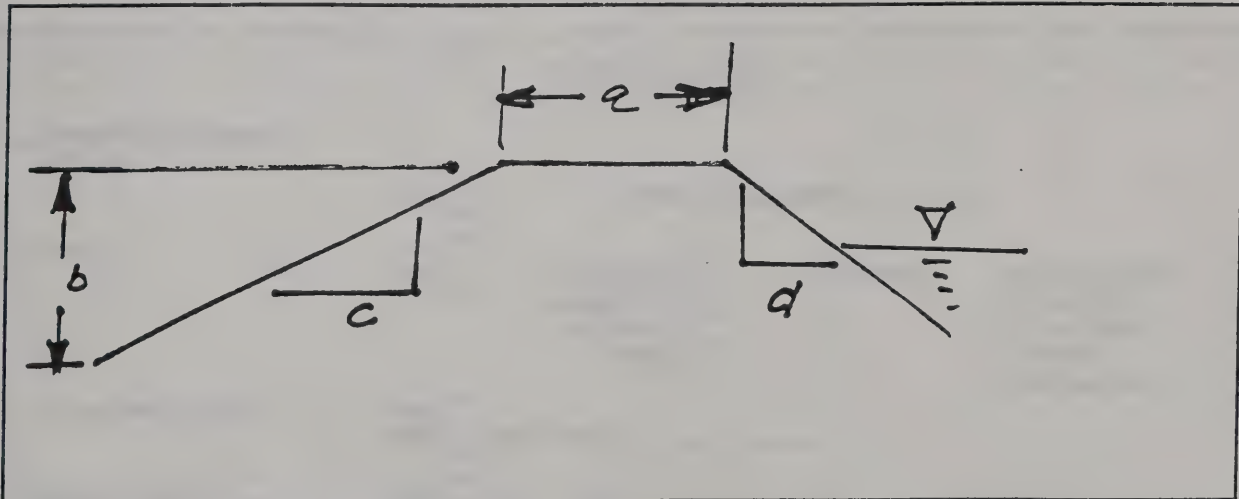
STATION

NORTHSIDE ☐
 SOUTHSIDE ☐
 EASTSIDE ☐
 WESTSIDE ☐

FROM STATION : _____
 TO STATION : _____

EMBANKMENT GEOMETRY

- a. ESTIMATED TOP WIDTH _____
 b. ESTIMATED OUTBOARD EMBANKMENT HEIGHT _____
 c. OUTBOARD SLOPE = 1 VERTICAL ON _____ HORIZONTAL
 d. INBOARD SLOPE = 1 VERTICAL ON _____ HORIZONTAL



SEEPAGE INDICATORS

PROBLEM

- ☐ TOE CANNOT BE SEEN-INCONCLUSIVE
☐ NO SEEPAGE EVIDENT
☐ STANDING WATER AT TOE-SOURCE UNKNOWN
☐ SOFT TO WALK ON SLOPE
☐ CATTAILS ON SLOPE
☐ SLOUGHED OUTBOARD SLOPE (OLD)
☐ FLOWING WATER
☐ SINKHOLES

LOCATION OF PROBLEM

- ☐ TOP THIRD OF SLOPE
☐ MIDDLE THIRD OF SLOPE
☐ BOTTOM THIRD OF SLOPE

Member		Ends	Member Length, L	Member Stiffness, k	Member Stiffness, k	Member Stiffness, k
1-2	1	2	10	10	10	10
2-3	2	3	10	10	10	10
3-4	3	4	10	10	10	10
4-5	4	5	10	10	10	10
5-6	5	6	10	10	10	10
6-7	6	7	10	10	10	10
7-8	7	8	10	10	10	10
8-9	8	9	10	10	10	10
9-10	9	10	10	10	10	10



Member		Ends	Member Length, L	Member Stiffness, k	Member Stiffness, k	Member Stiffness, k
1-2	1	2	10	10	10	10
2-3	2	3	10	10	10	10
3-4	3	4	10	10	10	10
4-5	4	5	10	10	10	10
5-6	5	6	10	10	10	10
6-7	6	7	10	10	10	10
7-8	7	8	10	10	10	10
8-9	8	9	10	10	10	10
9-10	9	10	10	10	10	10

OUTBOARD SLOPE

a. COVER

1. GRASS

2. BRUSH

3. TREES

4. RIP RAP

5. OTHER _____

b. ANIMAL BURROWS

NO ☐

YES ☐ REMARKS _____

**c. DRAINAGE
STRUCTURE(S)
THROUGH/UNDER SLOPE**

NO ☐

YES ☐

1. TYPE _____ 2. SIZE _____ 3. CONDITION _____

4. INFILTRATION INTO PIPE

NO ☐
YES ☐

5. SEEPAGE AROUND PIPE

NO ☐
YES ☐

6. COMMENTS _____

d. WALL AT TOE

NO ☐

YES ☐ HEIGHT (FT) _____
LENGTH (FT) _____
CONDITION _____

e. STREAM AT TOE

NO ☐

YES ☐ COMMENTS _____

INBOARD SLOPE

**a. ERODED/SLOUGHED
INBOARD SLOPE**

NO ☐

YES ☐ COMMENT _____

b. WALL

NO ☐

YES ☐

CONCRETE ☐
SHEETPILE ☐
MASONRY ☐
OTHER ☐

CONDITION:

1. NO DISTRESS
2. SPALLED
3. CRACKED
4. TILTED
5. DISPLACED

c. SLOPE PROTECTION

NO ☐

YES ☐ REMARKS _____

d. VEGETATION

NO ☐

YES ☐ REMARKS _____

e. ANIMAL BURROWS

NO ☐

YES ☐ REMARKS _____

ADJACENT TERRAIN

☐ LAND SLOPES UPHILL
☐ WOODED
☐ ACTIVE FARMLAND
☐ UNDEVELOPED
☐ DEVELOPED

☐ RECREATIONAL
☐ RESIDENTIAL
☐ COMMERCIAL/INDUSTRIAL

REMARKS _____

1998 - RISK ASSESSMENT SYSTEM

PARAMETER	WEIGHTED FACTORS	0	1						RANK
SEEPAGE	5	NONE	MOIST AREA						
	CRITERIA		SOFT TO WALK ON						
TOP WIDTH	3	0	1	2	3	4	5		
	Description								
(SEE TABLE "A" ATTACHED)	CRITERIA	EQUAL TO OR GREAT OR THAN	LESS BY 5'	LESS BY 10'	LESS BY 15'	LESS BY 20'	LESS THAN 5' WIDE		
							**		
OUTBOARD EMBANKMENT	1	0	1	2	3	4	5		
	CRITERIA	LESS THAN 5'	5'	10'	15'	20'	GREATER THAN 20'		
OUTBOARD SLOPE	3	0		2		4	5		
	CRITERIA	1V ON 3H OR FLATTER		1 ON 2		1 ON 1	STEEPER THAN 1 ON 1		
OUTBOARD SLOPE	1	0		2		4	5		
	CRITERIA	GRASS		WOODY GROWTH		TREES	COMPLETELY OVERGROWN		
INBOARD SLOPE	1	0	1		3		5		
	CRITERIA	RIP-RAP IN PLACE	SLOPE STABLE		SLOUGHING		ERODED		
ADJACENT TERRAIN	1	0	1		3		5		
	CRITERIA	LAND SLOPES UP HILL	WOODED-NO HOMES VISIBLE		ACTIVE FARMLAND		DEVELOPED		

TOTAL

** NOTIFY CANAL SUPERINTENDENT IMMEDIATELY

PLEASE PROVIDE COMMENTS BELOW IF A FIELD CONDITION EXISTS WHICH IS NOT ACCOUNTED FOR WITHIN THE TABLE (e.g. SLOUGHING, EROSION, DISTRESSED STRUCTURE, etc.).

RATING SYSTEM

- 1= Immediate emergency contract recommended
- 2= Begin monitoring system and schedule repairs soon
- 3= Should be improved prior to next 5 year inspection
- 4= Should be improved as part of normal scheduling
- 5= Satisfactory but shows signs of aging
- 6= Normal aging
- 7= No Deterioration

RATING

Date	Description
1900	Jan 1 - Received from Mr. Smith \$100.00
1901	Feb 15 - Paid to Mr. Jones \$50.00
1902	Mar 10 - Received from Mrs. Brown \$200.00
1903	Apr 5 - Paid to Mr. White \$75.00
1904	May 20 - Received from Mr. Green \$150.00
1905	Jun 10 - Paid to Mr. Black \$30.00

TABLE A (REORGANIZED)-
RECOMMENDED EMBANKMENT TOP WIDTH

EMBANKMENT HEIGHT, ft.	OUTBOARD SLOPE INCLINATION (Vertical : Horizontal)									
	WITHOUT SEEPAGE CONTROL					WITH SEEPAGE CONTROL				
	1 : 1	1 : 1.5	1 : 2	1 : 2.5	1 : 3 or flatter	1 : 1	1 : 1.5	1 : 2 or flatter		
4	18	16	14	12	10	14	12	10		
6	22	19	16	13	10	16	13	10		
8	26	22	18	14	10	18	14	10		
10	30	25	20	15	10	20	15	10		
12	34	28	22	16	10	22	16	10		
14	38	31	24	17	10	24	17	10		
16 or greater	42	34	26	18	10	26	18	10		

Технические условия	Рекомендуемые значения для машин (в мм)										Итого всего
	45	34	30	48	40	50	49	50	49	40	
14	38	34	34	44	40	34	44	34	44	40	
15	34	38	35	40	40	35	40	35	40	40	
10	30	32	30	42	40	30	42	30	42	40	
8	32	35	30	44	40	30	44	30	44	40	
6	35	40	30	42	40	30	42	30	42	40	
4	40	40	34	40	40	34	40	34	40	40	
Итого	4	4	4	4	4	4	4	4	4	4	
(Рекомендуемые значения для машин (в мм)) Итого всего: 40											

РЕКОМЕНДУЕМЫЕ ЗНАЧЕНИЯ ДЛЯ МАШИН
(В ММ)

00009



LRI